

What is claimed:

1. A method for treating or preventing cancer in a subject comprising
5 administering to the subject an amount of an antibody to C3b(i) or an antibody to C3b(i)
covalently linked to a second molecule, effective to treat or prevent cancer.
2. A method for treating or preventing cancer in a subject comprising
10 administering to the subject an amount of a nucleic acid sequence encoding an antibody to
C3b(i) or an antibody to C3b(i) covalently linked to a second molecule, effective to treat or
prevent cancer.
- 15 3. The method of Claim 1 in which the antibody is specific for C3b(i)
covalently linked to IgM on cancer cells.
- 20 4. The method of Claim 1 in which the antibody is specific for C3b(i)
covalently linked to glycoproteins or glycolipids on cancer cells.
5. The method of Claim 1 in which the antibody is a bispecific antibody which
25 is specific for C3b(i) and an effector cell receptor or antigen.
6. The method of Claim 1, 2, 3 or 4 in which the antibody is a monoclonal
antibody.
- 30 7. The method of Claim 1, 2, 3, 4 or 5 further comprising administering IgM
antibody.

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8. The method Claim 1, 2, 3, 4 or 5 further comprising administering one or more complement components.

9. The method of Claim 5 in which the effector cell is selected from the group consisting of: lymphocytes, monocytes, macrophages, dendritic cells, neutrophils, natural killer cells and erythrocytes.

10. The method of Claim 5 in which the effector cell is an erythrocyte.

11. The method of Claim 5 in which the antigen is selected from the group consisting of: CR1, CR2, CR3, CR4, CD16, CD32, CD64 and CD89.

12. The method of Claim 5 wherein the bispecific antibody is bound *ex vivo* to the effector cell.

13. The method of Claim 1, 2, 3, 4 or 5 in which the antibody is conjugated to a therapeutic agent.

14. A pharmaceutical composition comprising an antibody to C3b(i) or an antibody to C3b(i) covalently linked to a second molecule, in an amount effective to inhibit or prevent cancer in a subject.

15. A pharmaceutical composition comprising nucleic acid encoding an antibody to C3b(i) or an antibody to C3b(i) covalently linked to a second molecule, in an amount effective to inhibit or prevent cancer in a subject.

16. The pharmaceutical composition of Claim 14 or 15 in which the antibody is specific for C3b(i) covalently linked to IgM on cancer cells.

17. The pharmaceutical composition of Claim 14 or 15 in which the antibody is specific for C3b(i) covalently linked to glycoproteins or glycolipids on cancer cells.

18. A pharmaceutical composition comprising a bispecific antibody which is specific for C3b(i) and an effector cell receptor or antigen, in an amount effective to inhibit or prevent cancer in a subject.

19. The pharmaceutical composition of Claim 14, 15 or 18 in which the antibody is conjugated to a therapeutic agent.

20. A method for detecting cancer comprising:

- a) administering to a subject an effective amount of a labeled antibody which specifically binds to C3b(i) or a labeled antibody to C3b(i) covalently linked to a second molecule;
- b) waiting for a time interval following the administering to permit the labeled antibody to preferentially concentrate at any cancerous site in the subject;
- c) determining background level; and
- d) detecting the labeled antibody in the subject, wherein detection of the labeled antibody above the background level indicates the presence of a cancer.

21. The method of Claim 20 in which the subject is a human.

22. The method of Claim 20 in which the antibody is a monoclonal antibody.

23. The method of Claim 20 in which the antibody is a humanized antibody.

24. The method of Claim 20 in which the labeled antibody is labeled with a radioisotope.

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25. The method of Claim 20 in which the labeled antibody is detected *in vivo*.

26. The method of Claim 20 in which the time interval is 6 hours to 48 hours.

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27. The method of Claim 20 in which the labeled antibody is administered intravenously.

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28. The method of Claim 20 which further comprises repeating steps (a) through (d) at monthly intervals.

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29. A method for detecting cancer in a subject, comprising imaging said subject at a time interval after administration to said subject of an effective amount of a labeled antibody which specifically binds to C3b(i) or which specifically binds to C3b(i) covalently linked to a second molecule, said time interval being sufficient to permit the labeled antibody to preferentially concentrate at any cancerous site in said subject; wherein detection of the labeled antibody localized at said site in the subject indicates the presence of cancer.

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30. The method of Claim 29 in which the subject is a human.

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31. The method of Claim 29 in which the antibody is a monoclonal antibody.

32. The method of Claim 29 in which the antibody is a humanized antibody.

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33. The method of Claim 29 in which the antibody is labeled with a radioisotope.
34. The method of Claim 29 in which the time interval is 6 hours to 48 hours.
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35. A method of depleting cancer cells from cells obtained from an animal with cancer comprising contacting *in vitro* a sample comprising cells obtained from said animal with an antibody to C3b(i) or an antibody to C3b(i) covalently linked to a second molecule.
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36. The method of Claim 35 in which the cells are bone marrow cells.
37. The method of Claim 35 which further comprises contacting *in vitro* said
- 15 sample with IgM antibody.
38. The method of Claim 35 which further comprises contacting *in vitro* said
- 20 sample with one or more complement components.
39. The method of Claim 35, 36, 37 or 38 in which the animal is human.
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40. The method of Claim 35, 36, 37 or 38 which further comprises after said contacting step, the step of administering at least a portion of said cells to the animal.
41. The pharmaceutical composition of Claim 14 in which the antibody is
- 30 purified.
42. The pharmaceutical composition of Claim 14 or 41 further comprising a
- 35 pharmaceutically acceptable carrier.

43. A kit comprising, in one or more containers, an antibody to C3b(i) or an antibody to C3b(i) covalently linked to a second molecule.

5 44. The kit of Claim 43 further comprising IgM antibody.

45. The kit of Claim 43 or 44 further comprising one or more complement components.
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46. The method of Claim 1, 2, 3, 4 or 5 further comprising administering IgM antibody and one or more complement components.

15 47. The method of Claim 1, 2, 3, 4 or 5 in which the antibody is conjugated to a therapeutic agent.

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